What is claimed is:

1. An electrode comprising:

a substrate having a first end and a second end;

a first layer covering at least a portion of the first end, wherein the first layer includes a layer of a material selected from the group of a carbide, nitride or carbonitride of at least one of the metals titanium, vanadium, zirconium, niobium, molybdenum, hafnium, tantalum or tungsten; and

a second layer covering at least a portion of the first layer, wherein the second layer includes iridium.

2. The electrode of claim 1, wherein the first layer is made at least in part from a porous material.

3. The electrode of claim 1, wherein the second layer includes iridium oxide.

4. The electrode of claim 1, wherein the second layer is an outer surface of the electrode.

5. The electrode of claim 1, further comprising an electrical conductor electrically connected to the second end of the electrode.

6. The electrode of claim 1, wherein the substrate includes platinum.

7. The electrode of claim 1, wherein the substrate includes iridium.

8. The electrode of claim 1, wherein the first layer contacts the substrate.

9. The electrode of claim 1, wherein the second layer contacts the first layer.

10. A cardiac pacing lead assembly, comprising:

an electrode having a substrate with a first end and a second end, and having a first layer covering at least a portion of the first end of the substrate, and having a second layer covering at least a portion of the first layer, wherein the first layer includes a layer of a material selected from the group of a carbide, nitride or carbonitride of at least one of the metals titanium, vanadium, zirconium, niobium, molybdenum, hafnium, tantalum or tungsten, and wherein the second layer includes iridium; and

an electrical conductor electrically connected to the second end.

11. The lead assembly of claim 10, wherein the first layer is made at least in part from a porous material.

12. The electrode of claim 10, wherein the second layer includes iridium oxide.

13. The lead assembly of claim 10, wherein the second layer is an outer surface of the electrode.

14. The lead assembly of claim 10, further comprising an electrical conductor electrically connected to the second end of the electrode.

15. The lead assembly of claim 10, wherein the substrate includes platinum.

16. The lead assembly of claim 10, wherein the substrate includes iridium.

17. The lead assembly of claim 10, wherein the first layer contacts the substrate.

18. The lead assembly of claim 10, wherein the second layer contacts the first layer.

19. A cardiac pacemaker, comprising:

an electrical pulse generator; and

an electrode electrically connected to the pulse generator, the electrode having a substrate with a first end and a second end, and having a first layer covering at least a portion of the first end, and having a second layer covering at least a portion of the first layer, wherein the first layer includes a layer of a material selected from the group of a carbide, nitride or carbonitride of at least one of the metals titanium, vanadium, zirconium, niobium, molybdenum, hafnium, tantalum or tungsten, and wherein the second layer includes iridium.

20. The cardiac pacemaker of claim 19, wherein the first layer is porous.

21. The electrode of claim 19, wherein the second layer includes iridium oxide.

22. The cardiac pacemaker of claim 19, wherein the second layer is an outer surface of the electrode.

23. The cardiac pacemaker of claim 19, further comprising an electrical conductor electrically

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connected to the second end of the electrode, and electrically connected to the pulse generator.

24. The cardiac pacemaker of claim 19, wherein the substrate includes platinum.

25. The cardiac pacemaker of claim 19, wherein the substrate includes iridium.

26. The cardiac pacemaker of claim 19, wherein the first layer contacts the substrate.

27. The cardiac pacemaker of claim 19, wherein the second layer contacts the first layer.

28. A method of making an electrode, comprising;

providing a substrate;

providing a first layer over at least a portion of the substrate to provide a coated substrate, the first layer being comprised at least in part of a layer of a material selected from the group of a carbide, nitride or carbonitride of at least one of the metals titanium, vanadium, zirconium, niobium, molybdenum, hafnium, tantalum or tungsten; and

providing a second layer over at least a portion of the first layer to provide the electrode, the second layer having iridium.

29. The method of claim 28, further comprising etching the substrate.

30. The method of claim 29, wherein etching the substrate includes RF sputter etching the substrate.

31. The method of claim 29, wherein etching the substrate is performed in an argon rich atmosphere.

32. The method of claim 28, wherein providing the first layer includes DC sputtering with titanium.

33. The method of claim 32, wherein DC sputtering with titanium is performed in an argon rich atmosphere.

34. The method of claim 32, wherein an RF bias is applied to the substrate while DC sputtering with titanium occurs.

35. The method of claim 28, wherein providing the first layer includes providing a nitrogen rich atmosphere and

DC sputtering in the nitrogen rich atmosphere with a material selected from the group of titanium, vanadium, zirconium, niobium, molybdenum, hafnium, tantalum or tungsten.

36. The method of claim 35, wherein DC sputtering in the nitrogen rich atmosphere occurs while an RF bias is applied to the substrate.

37. The method of claim 35, wherein DC sputtering in the nitrogen rich atmosphere occurs for a period of time while an RF bias is applied to the electrode, and then for a period of time while no RF bias is applied to the electrode.

38. The method of claim 28, wherein providing the second layer is performed using an RF sputter chamber.

39. The method of claim 28, wherein the first layer contacts the substrate.

40. The method of claim 28, wherein the second layer contacts the first layer.